

1011
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AUG 21 2001

TECH CENTER 1600/2900

DATE: 07/18/2001
TIME: 16:19:23

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/611,527A

Input Set : D:\512.app.txt

Output Set: N:\CRF3\07182001\I611527A.raw

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AUG 16 2001

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1641

#3

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AUG 30 2001

TECH CENTER 1600/2900

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OIRP/JCWS

#3

3 <110> APPLICANT: Williams, Lewis T.
4 Escobedo, Jaime
5 Innis, Michael A.
6 Garcia, Pablo Dominguez
7 Klinger, Julie
8 Reinhard, Christoph
9 Randazzo, Filippo
10 Kennedy, Giulia C.
11 Pot, David
12 Lamson, George
13 Drmanac, Radoje
14 Crkvenjakov, Radomir
15 Dickson, Mark
16 Drmanac, Snezana
17 Labat, Ivan
18 Leshkowitz, Dena
19 Kita, David
20 Garcia, Veronica
21 Jones, William Lee
22 Stache-Crain, Birjit
24 <120> TITLE OF INVENTION: NOVEL HUMAN GENES AND GENE EXPRESSION
25 PRODUCTS
27 <130> FILE REFERENCE: 200130.512
C--> 29 <140> CURRENT APPLICATION NUMBER: US/09/611,527A
30 <141> CURRENT FILING DATE: 2000-06-30
32 <160> NUMBER OF SEQ ID NOS: 3351
34 <170> SOFTWARE: FastSEQ for Windows Version 3.0
36 <210> SEQ ID NO: 1
37 <211> LENGTH: 415
38 <212> TYPE: DNA
39 <213> ORGANISM: Homo sapien
41 <400> SEQUENCE: 1
42 ttcgaattcg gcacgagatt tcatagatgg agaaactgat cacagagctg taatgaagac 60
43 agaattgaga tatgagggca aaagctaatt aaacgcatcc tcacaggtag cctttctttc 120
44 agtgaacctg tagactagtc cagtaatact tattaaaatt agttgttaga ggctgggcat 180
45 ggtggttcaa gcctgtaatc tcagcactgt gggaggccaa ggcggacaga tcactcagag 240
46 tcagaagttc gagaccagct tggccaacat ggcaaaaccc tgtctctact aaaaatacaa 300
47 aaattagttg ggtgtggtgg cacatgcctg taatcccagc cactcgggag gtgaaggcac 360
48 aagaattggt tgaacctggg aagcagaggt tgcagtgagc tgagattgca ctgct 415
50 <210> SEQ ID NO: 2
51 <211> LENGTH: 225
52 <212> TYPE: DNA
53 <213> ORGANISM: Homo sapien
55 <220> FEATURE:
56 <221> NAME/KEY: misc_feature
57 <222> LOCATION: (1)...(225)
58 <223> OTHER INFORMATION: n = A,T,C or G

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```

60 <400> SEQUENCE: 2
W--> 61 ggcacgagct ctctctctct ctctctctct ctctctctct ctctctctct cttaggtctc 60
62 tctctctctc tctctatcta tctctcagac tatgtgtgag tgtgagagag agagagagag 120
63 agagagagag agagagagag agaaagacag agagagacag gatgaatagt ataaaagagg 180
64 gggggctaga gaaagagaga agggaaaaag agagaaaaaa aaagc 225
66 <210> SEQ ID NO: 3
67 <211> LENGTH: 437
68 <212> TYPE: DNA
69 <213> ORGANISM: Homo sapien
71 <400> SEQUENCE: 3
72 ggcacgagag agactgtggc tcatgcttgt gatccccctg ccttggcctc ccaaagtctc 60
73 gggattacag gggatgaacca ctgtgcctgg ccatttttc tttataaata ttgcaacata 120
74 atgttttata gacaaacatt caagggtact ttggctttat gaacttcagg atttctggtg 180
75 ctgaaaaagc gcttgaagca gtatcaccaa gatttttagat attaaaaagt ctggtgtacc 240
76 agacattgag tcataatcat ctatattcaa gggatacttt cattgataac tttggtatta 300
77 tgctgccctt cacagaagac aacgtctcgg gcaggatcac atgctcccta gcagatgctg 360
78 atcagtgatg tcatagaaat tacatgaatg catttgcttt aaatagcagt taaccattgt 420
79 atatggggcg ttttgc 437
81 <210> SEQ ID NO: 4
82 <211> LENGTH: 360
83 <212> TYPE: DNA
84 <213> ORGANISM: Homo sapien
86 <400> SEQUENCE: 4
87 ggcacgaggc ctggcatggt ggcacatgcc cataattcca gctactcggg aggctaaggc 60
88 aggagaatcg cttgaacctg acgggggtga ggttgcaagt agccgagatc gcaccacttc 120
89 actccagcct gggcgaaaga gcgaaactcc atctcaaaaa aaaaaaaggg aaggggaaaa 180
90 aaaaccggaa aagatttggg tggggaactt ttaggagggg tggggccctt gggggccctta 240
91 actaacccca ggaatcctt taaagggaaa gggggggaag ggttgtcaaa ccccgggggg 300
92 tcatggtaaa aaaagggttg ggttccctta attctttccc caattttcaa aaccataaa 360
94 <210> SEQ ID NO: 5
95 <211> LENGTH: 600
96 <212> TYPE: DNA
97 <213> ORGANISM: Homo sapien
99 <220> FEATURE:
100 <221> NAME/KEY: misc_feature
101 <222> LOCATION: (1)...(600)
102 <223> OTHER INFORMATION: n = A,T,C or G
104 <400> SEQUENCE: 5
105 tacggctgcg agaagacgac agaagggtgg ctaacacggt gaaaccccggt ctgtactaaa 60
106 aatacaaaaa gttagccggg cgtggtggcg ggcgcctgta gtctcagcta cttgggaggc 120
107 tgaggcagag gcaggagaat ggtgtgaacc tgggagacgg aggttgtggt gagccgagat 180
108 caggccactg cactccagcc tgggtaacag agcaagactc cgtctcaaaa aaaaaaaaaa 240
109 aaaaaaaaaa aggggggggg gtttttttcc gtaaccccca ccttgaaaaa accctttggg 300
110 ggttggggcc cccccccct taaggggggg gaaaaaaagg ttttttttgg gaaaattggg 360
111 gggctttttt ttttttggga ccccttttaa ggcggaaaaa cctgttaacc acaaatttgg 420
W--> 112 tttttttttt tttttgttgg gggggggggg ggagggggtt tnnnnnnnnn ncnangaaag 480
113 ggggggcccc aacacggtgt ggttttaate ccccttaggg cgccccctt ttttttttgg 540
W--> 114 gggcgcgcgg tgggggggaa gaaaaaatgg ggnnttttgg ttaccctgta ctattttaac 600
116 <210> SEQ ID NO: 6

```

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Input Set : D:\512.app.txt

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```
117 <211> LENGTH: 404
118 <212> TYPE: DNA
119 <213> ORGANISM: Homo sapien
121 <400> SEQUENCE: 6
122 attcggcacg aggagagaga gagagagaga gagagagaga gagagagaga gagagagaga      60
123 gagagagaga gagagagaga gagagagaga gagagagaga gagagagaga gagagagaga      120
124 gagagagaga gagagagaga gagagagaga gagagagaga gagagagaga gagagagaga      180
125 gagagagaga gagagttttt tttttttttt taaaaaaata tttttttttt tgcgcgcaca      240
126 cacactctct cttttttttt tttttttttt acactccgcg cgcccgcgtt atatacaccc      300
127 acacatatat atatatatat atatatatat atgtgtatat atcttttttt tccccccacc      360
128 cgccgggggc gcgcgcacgc cctccccccc ctctgtctct attt                        404
130 <210> SEQ ID NO: 7
131 <211> LENGTH: 358
132 <212> TYPE: DNA
133 <213> ORGANISM: Homo sapien
135 <400> SEQUENCE: 7
136 tacggctgcg agaagacgac agaaggggct ggtaattttt gtatttttag tagagactgg      60
137 gtttcaccat gttggccagg ctggtcttga actccaggcc tcgagtaatc caccacctt      120
138 ggctcccaa agtggtgcga ttagaggcat gagccaccgt gctcaggctt cccacaataa      180
139 tttttacttt gacacataca gacttcaata tcacattcgt atgcaccacg ctatatggga      240
140 gaatatctgt caagactcat gagttgttat gtatagagtg cttaaattgt ggacataata      300
141 aataatatat ctatccagat gcagtggctc acgcctgtaa tcccagcact ttggggagg      358
143 <210> SEQ ID NO: 8
144 <211> LENGTH: 403
145 <212> TYPE: DNA
146 <213> ORGANISM: Homo sapien
148 <220> FEATURE:
149 <221> NAME/KEY: misc_feature
150 <222> LOCATION: (1)...(403)
151 <223> OTHER INFORMATION: n = A,T,C or G
153 <400> SEQUENCE: 8
154 ggcaccagga gagagagaga gagagagaga gagagagaga gagagagaga gagagagaga      60
155 gagagagaga gagagagaga gagagagcgc ccccttgga gagagatata tctctcttag      120
156 gggggagcga tacccttca cccagtgtct ctggttagaga gatttttttt ttctttatit      180
W--> 157 ctctcacagg gggggagata tatacanatc tttttatgga ggcgcgctca ttttccctc      240
158 tgtgagaaac tctatttttt tttccccctc tttctgtgca cacacacaca ggttttgtgg      300
159 ggggggcccc cataccccca cccccctct atttatgtgg gccgcccccc acactataat      360
160 aaaaaaaatt ttggggcccc ccccaatat cttttttttt cct                        403
162 <210> SEQ ID NO: 9
163 <211> LENGTH: 390
164 <212> TYPE: DNA
165 <213> ORGANISM: Homo sapien
167 <400> SEQUENCE: 9
168 cgttgctgtc ggggggctga tccccctcc cccctcccgg acggggcggc tggccggccg      60
169 gggggctgac cacttcccac accctgcggg agggggaggg aggggctcct aaactcttat      120
170 aacttgcgag agggaggggg aggggtacct aggttctcct aacttgtgac acggcgcaga      180
171 cgccacgcat atggcatact cggttctgag acggcggagg cgctcataaa ctctctact      240
172 gtgccagagg ggggaggggc cgccacatg cgctactaac atccgacact gtgtaggggg      300
173 atacaggcgc tctccgaatc atagacgagg gggggccgat ctctacttaa atgcagacat      360
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```
174 gaaaatactc tttttgtgaa attcgcgaac 390
176 <210> SEQ ID NO: 10
177 <211> LENGTH: 371
178 <212> TYPE: DNA
179 <213> ORGANISM: Homo sapien
181 <400> SEQUENCE: 10
182 cgttgctgtc ggtcaccagg gaccttgcct gagaatattt tccggtggta tttcttggtt 60
183 gaggtcccac acggtgcact gaaaagtgtg atgattcttg cgaatggtga atcttatgtt 120
184 taggatatga acagaaacgg catgttcttt ttttatgtta ttttttaa attttttat 180
185 ttcaacaagt ttttggcgaa caggtgggtg ttggttacat gaataagctc tttagagggtg 240
186 atgtctgaga ggtgggtgct cccatcaccc aagtagtgta cacagtaccc aatgtgtagt 300
187 cttttatccc tcaactctct cctacccttt ccccgagtc tccaaagtcc attgtgtcat 360
188 tcttatgccg g 371
190 <210> SEQ ID NO: 11
191 <211> LENGTH: 428
192 <212> TYPE: DNA
193 <213> ORGANISM: Homo sapien
195 <220> FEATURE:
196 <221> NAME/KEY: misc_feature
197 <222> LOCATION: (1)...(428)
198 <223> OTHER INFORMATION: n = A,T,C or G
200 <400> SEQUENCE: 11
201 gaattcggca cgaggagaga gagagagaga gagagagaga gagagagaga gagagagaga 60
202 gagagagaga gagagagaga gagagagaga gagagagaga gagagagaga gagagagaga 120
203 gacaaaaaca cagcgcgccg cccgatctct atattgtgtg tctccacaca tcaggggggg 180
204 ggagagacac acacacacac gagatatgtg tgtgtgtgtg tctctatcat gtatctctct 240
205 cacacagaga gagctctctc tgtggtgtga gagaaagaca caggggtgtc tctcttttcg 300
206 cgcgcggggag agacacatat attctgacgc gcgtgcgctg tgtatatata tcttcgcgcc 360
W--> 207 acaggcgcgc ccacagagag aaaaacctnt actcacaac cacctttggg gtgagggtgt 420
W--> 208 ttttaaan 428
210 <210> SEQ ID NO: 12
211 <211> LENGTH: 437
212 <212> TYPE: DNA
213 <213> ORGANISM: Homo sapien
215 <220> FEATURE:
216 <221> NAME/KEY: misc_feature
217 <222> LOCATION: (1)...(437)
218 <223> OTHER INFORMATION: n = A,T,C or G
220 <400> SEQUENCE: 12
W--> 221 aaaacacgtc tcttgttctt ttatgaggct nnnnnacatt cgctcgaact cctgaccttg 60
222 tgatccacc acctcagcct ccaaagtgc taggattaca ggcagagcc accgcgcctg 120
W--> 223 gcctgtctaa tcttttat ttatgcata ggctcctcct ttcttccttc atggnttcct 180
W--> 224 ttttctact tccctatctc gntttctttc cttcttttca tttacagaga aatgggtgtta 240
225 gaaatgaatg agaggagtga gcaaagaaag atgagggaaa aatagatgtg ttaaggagta 300
226 tacgcataaa gaaaagaggg caggaggaaa agctgttcac cccgactccc atcctaactc 360
227 tgcgtagtct ttcgttttct gagaataagt aggtcagaag gtacaggaga aactttcttg 420
228 gaatacacia aaggaac 437
230 <210> SEQ ID NO: 13
231 <211> LENGTH: 389
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```
232 <212> TYPE: DNA
233 <213> ORGANISM: Homo sapien
235 <400> SEQUENCE: 13
236   tacggttgcg agaagacgac agaagggcctt cttcattttt gaattgagag taataatatt      60
237   ctgccttggt ggaataatat aagaatgata tgatgatacc tttttacata atacctacca      120
238   aatatcaggt gctgaaaaaa atttggctcc tgtttctttc catgtctgtc acgaacgcag      180
239   aagctagata tttgtcctaa cacattaagt ggaaaggtaa atgaaactta tctgctttcc      240
240   tctagccctt tcttttcagt caggcaatgc tgattatgac tagataattt taagatgtga      300
241   gtatattcat tgaatctcag ctgtgtaaac tatataacaa gtatgtgaag gcaaaatgga      360
242   gccgatacct ttgataacct gatttatag                                     389
244 <210> SEQ ID NO: 14
245 <211> LENGTH: 428
246 <212> TYPE: DNA
247 <213> ORGANISM: Homo sapien
249 <400> SEQUENCE: 14
250   ggcacgagac tttccactgt aatccaacca cctaagttta tcagggtgctt cactgaggaa      60
251   gcctagtttt ttaagcacia tagcaaaacc atcagctctg tattttctcc tgttatttca      120
252   ttacagtagc tgcttggtgg aactaggaaa aattcttcca acatatttta aggcctaaaa      180
253   tcttagttcc ccattctcct accttataga ttcacaggcc tttctcgcct aggcatacata      240
254   gataaacgta attgtttggg gagttgaatt taatgaactt atctaacttt gtaacccatc      300
255   ttggcttttag taactttatc aagggtggtg ctttaatgaa tataatggta aacttttagag      360
256   gacgctaaag cctcctttta tagcgcttct caacggtagg gagagctgaa gggaaaacat      420
257   tctgactg                                     428
259 <210> SEQ ID NO: 15
260 <211> LENGTH: 368
261 <212> TYPE: DNA
262 <213> ORGANISM: Homo sapien
264 <400> SEQUENCE: 15
265   cgttgctgtc ggccatctca aaaggaaaaca agttctgcta gtgatgcttt catttgatca      60
266   ggggagagtt agaagccagc caccctaatta gtgacttgca caaaaccag tgaattaagt      120
267   acacttgaca aataccaaat gacacatttt tgtgccagac cagagcaagg agaaggctgt      180
268   tctgacccaa cagaaagggc tccccagggc agtgttttcc taacttcctt gtgaatggga      240
269   attgcctggg acattgttaa aacacagctt cccagacccc tctcttgggg ctcttgattt      300
270   agtgcttctg ggatgggccc aggaatttgt atttttagca agcatctcag gtgattctta      360
271   caagaaat                                     368
273 <210> SEQ ID NO: 16
274 <211> LENGTH: 400
275 <212> TYPE: DNA
276 <213> ORGANISM: Homo sapien
278 <220> FEATURE:
279 <221> NAME/KEY: misc_feature
280 <222> LOCATION: (1)...(400)
281 <223> OTHER INFORMATION: n = A,T,C or G
283 <400> SEQUENCE: 16
284   ggcacgagga gagagagaga gagagagatt gagagataga gagagagaga gagagagaga      60
285   gagagagaga gagagagaga gagagagaga gagagagaga gagagagaga gagagagaga      120
286   gagagagaga gagagagaga gagagagaga gagagagaga gagagagaga gagagagagc      180
287   cccccctct ccccccttt tttttttttt tttttttccc cctcttttt tttttctttt      240
288   tttttttttc taaaagcaa gtggcctggg gccggccccc ccccccccc caccaaaact      300
```

→ Use of n and/or Xaa has been detected in the Sequence Listing.
Review the Sequence Listing to insure a corresponding
explanation is presented in the <220> to <223> fields of
each sequence using n or Xaa.

VERIFICATION SUMMARY

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L:29 M:270 C: Current Application Number differs, Wrong Format
 L:61 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:2
 L:112 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
 L:114 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5
 L:157 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
 L:207 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
 L:208 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:11
 L:221 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
 L:223 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
 L:224 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:12
 L:289 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:16
 L:336 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:19
 L:397 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:23
 L:445 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26
 L:479 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28
 L:539 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32
 L:624 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:38
 L:642 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:39
 L:700 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:43
 L:780 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48
 L:793 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49
 L:794 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:49
 L:846 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52
 L:894 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:55
 L:912 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:56
 L:1040 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:65
 L:1077 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:67
 L:1095 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:68
 L:1159 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:73
 L:1161 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:73
 L:1234 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:78
 L:1283 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82
 L:1286 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:82
 L:1328 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:85
 L:1331 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:85
 L:1350 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:86
 L:1351 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:86
 L:1386 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:88
 L:1406 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89
 L:1407 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:89
 L:1472 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:93
 L:1528 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:97
 L:1607 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:102
 L:1663 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:106
 L:1688 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:107
 L:1721 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:109
 L:1767 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:112
 L:1801 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:114

VERIFICATION SUMMARY

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L:1835 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:116
L:1924 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:122
L:1942 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:123